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ABSTRACT

Much of the school reform and restructuring literature has focused on the need to improve or totally restructure teaching practice in order to create schools that effectively prepare children for the future. Recent literature on learning in the workplace and teacher learning and change provide some insight into the reasons why many teacher change efforts have been less than optimal in the past and suggest some principles for maximizing the effectiveness of teacher improvement programs. This paper outlines basic principles for supporting long-term change in teaching practice and suggests that engaging teachers in structured collaborative reflection can be a particularly powerful change strategy. A collaborative reflection program in which teachers use video to develop an understanding of standards for effective practice and examine their own practice in light of these standards is examined. Suggestions are made for designing dynamic, long-term video study groups that can support the kinds of changes in teaching practice needed to create effective learning environments for all students. (Author/LL)

Using Collaborative Reflection to Support Changes in Classroom Practice

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Abstract

Much of the school reform and restructuring literature has focused on the need to improve or totally restructure teaching practice in order to create schools that effectively prepare our children for the future. Recent literature on learning in the workplace and teacher learning and change provide some insight into the reasons why many teacher change efforts have been less than optimal in the past and suggest some principles for maximizing the effectiveness of teacher improvement programs. This paper outlines basic principles for supporting long-term change in teaching practice and suggests that engaging teachers in structured collaborative reflection can be a particularly powerful change strategy. A collaborative reflection program in which teachers use video to develop an understanding of standards for effective practice and examine their own practice in the light of these standards is examined. Suggestions are made for designing dynamic, long-term video study groups that can support the kinds of changes in teaching practice needed to create effective learning environments for all students.

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Using Collaborative Reflection to Support Changes in Classroom Practice

Much of the recent school reform and restructuring literature has focused on the need to improve or totally restructure teaching practice in order to effect meaningful changes in schools. While professional development opportunities abound in most school districts and many teachers attempt to implement the techniques presented in these workshops and classes in their classrooms, the results in terms of actual change in practice have been disappointing (Goodlad, 1990; Guskey, 1986; Smylie, 1988). It is obvious from the current structure of schools that the kinds of radical changes needed to better meet the needs of our students simply have not occurred in most settings, even though staff development and curriculum innovation have been an intense focus in many school districts for a number of years. Continued study of how to foster long-term changes in knowledge, beliefs and practice of teachers is an essential part of the educational redesign process.

There are a number of bodies of literature that need to be examined in order to get a complete picture of the complex processes involved in teacher change. While research from cognitive psychology, teacher learning, staff development, and organizational theory all contribute to a greater understanding of the process, it is becoming evident that no particular area of study is complete on its own. Put together, these different approaches provide insight into the reasons why many change efforts have been less than optimal in the past and suggest some basic principles for maximizing the effectiveness of teacher improvement efforts.

Principles for designing programs that support teacher change

Create an awareness of the need for change

Although there is a growing consensus among educational researchers and restructuring "activists" about the need for radical change in teaching practice, that consensus is not necessarily shared by large numbers of practitioners. While many teachers recognize the need to try new techniques or materials, recognition of the need for radical changes in their models of teaching and learning is less prevalent. The concept of radical change in learning structures and practices threatens a strong socially constructed and shared framework of theory, values, and related technology which teachers have been using for a long time. In order to support meaningful changes in practice in any activity, personal and organizational change theorists have long been aware of the need for the participants to see a need for change (Fullan & Steigelbauer, 1990; Nadler, Gerstein & Shaw, 1992). Teachers are no exception to this rule. They too need to be challenged and supported in seeing the need for change before they will invest the time and energy needed to accomplish long-lasting change in practice.

This awareness may come from a variety of sources. External forces such as changes in the economy and demands for different skills in the workplace, increasing diversity in the composition of the student body, political demands for more globally and socially aware students, and the introduction of new technologies are already creating pressures to change on teachers and schools (Collins, 1990; Kennedy, 1991; SCANS, 1992). Internal contradictions between teachers' values and the outcomes they see happening in their classrooms can also provide a powerful impetus for change. In both

cases, teachers need to be made aware of the discrepancies between desired outcomes for students and current practice. Creating an awareness of the need for change is the challenging first step that needs to be taken in any teacher change effort.

Focus on perceptions and practice

While there is still some debate over what comes first, changes in knowledge and beliefs or changes in practice, there is ample evidence that knowledge and beliefs have a powerful impact on practice and need to be considered when designing teacher learning opportunities (Guskey, 1986; Kennedy, 1991; Pajares, 1992; Richardson, Anders, Tidwell, & Lloyd, 1991). The past history of staff development indicates that focusing on teaching strategies and techniques alone has not been particularly effective in supporting long term changes in practice (Joyce & Showers, 1988; Wildman & Niles, 1987). Analyzing the underlying assumptions and perceptions that shape teaching practice while learning about new materials or strategies provides a more powerful combination for supporting teacher change.

Teach teachers how to reflect on beliefs and practice

Since many of their beliefs about teaching and learning are implicit, teachers need assistance in making those beliefs explicit. One of the strong themes in current teacher education efforts focuses on personal reflection as a source of learning and change. Teachers are supported in examining their teaching behaviors and determining the theories and assumptions that drive their practices through a variety of reflective techniques including journals, case studies and narratives, coaching or clinical supervision, and peer study groups.

Reflecting on one's practice may take a variety of forms. In addition to the spontaneous, often tacit reflection that teachers constantly engage in while teaching, Louden (1991) describes the following forms of reflection: a) Introspection: looking inward and examining one's thoughts and feelings; b) Replay and rehearsal: describing events that happened or future actions; c) Inquiry: engaging in a cycle of planning, acting, observing, and reflecting on the results. All of these forms of reflection have been used in different teacher education efforts to support teacher learning.

These efforts to support learning through reflection have generated some interesting insights into the reflection process. One major insight is that it is a very difficult process that requires "substantial training, additional resources, and large doses of patience and trust just to get started" (Wildman & Niles, 1987, p. 26). Because of the press of daily activities and decisions and the way they are taught to teach, teachers have little experience in describing and constructing meaning out of what goes on in their classrooms. Teacher's talk about practice is primarily judgmental in nature and often not consistent with actual events (Wildman & Niles, 1987). Teachers need assistance in learning to observe their practice, to find evidence for their claims, and to recognize the difference between judgments and observations in order for reflection to be most effective.

In addition, it is important that teachers have a model or heuristic framework to use when reflecting on their practice. Because of the complex nature of teaching, it is impossible to examine or recall every action and its implication. These frameworks might include models of instruction and classroom management, models of student development, or models of

pedagogical knowledge in a particular domain (Menges, 1992). For example, a teacher might examine the same writing instruction episode in light of the cognitive apprenticeship model (Collins, Brown, and Newman, 1989), the inquiry model (Hillocks, 1986), or the process approach to writing instruction model (Calkins, 1986). Each of these different models could provide a framework for shaping her reflections on her practice and thus help bound an otherwise limitless process.

Move from examination to transformation

While making beliefs explicit and connecting them to practice can be a helpful learning opportunity for teachers, simply focusing on current beliefs and practice will not necessarily lead to change. If the ultimate goal is to change practice to better meet the needs of students, then teachers need to be assisted in either bringing their practice closer to their beliefs or changing the underlying beliefs and theories that drive those practices. In order to bring practices closer to beliefs, teachers need to be taught systematic inquiry techniques that allow them to collect data on their teaching practices and the outcomes of those practices (Baird, 1992). Only when practice and outcomes are described accurately can the teacher begin to examine the difference between his beliefs and practice. Teachers must also be assisted in examining the reasons for these discrepancies. Preconceptions about the capabilities of a particular group of students, the priorities or constraints in a particular environment or personal factors such as the teacher's stage of professional development can have a particularly powerful effect on how well a teacher is able to put his beliefs into practice (Barnes, 1992). Bringing these perceptions

into the open when comparing beliefs and practice can be a helpful part of the reflection process.

In order to achieve radical change in teaching practice, there will often be a need to change the underlying beliefs and knowledge driving practice. Because beliefs are frequently self-protecting and not necessarily based on rational evidence, this is a particularly challenging goal. In order to change their basic beliefs about teaching and learning, teachers will need to be exposed to vivid, concrete, and credible examples of alternative approaches to teaching and learning. They will need assistance in seeing the differences between the new perspectives and their current models of instruction. Ultimately, teachers will have to test new theories and models in their own teaching contexts and find them to be successful in order for them to replace or modify existing beliefs and models (Dwyer, Ringstaff & Sandholtz, 1990; Kennedy, 1991; Pajares, 1992).

Develop shared standards for effective practice

Ultimately, one of the most important issues surrounding teacher change is the question of what beliefs and practices teachers should adopt. As Richardson (1990) asks, "What materials, thoughts, theories, or practices would we like to introduce teachers to with the thought that they will be affected by them-and how should they be introduced?" (p.13). Because individual beliefs and practices may be based on misconceptions and a lack of knowledge, relying on personal reflection for meaningful change seems futile. Beliefs about how and what we should teach or "standards for warranted practice" (Richardson, 1990) need to be constructed in the greater

educational "community of practice" (Lave & Wenger, 1991) for maximum reliability and effectiveness.

One important source for determining what comprises effective practice is the shared wisdom or craft knowledge of expert teachers (Leinhardt, 1990). Teachers have a great deal of practical knowledge based on experience that needs to be accessed in order to determine what direction educational change should take. Because much of this knowledge is tacit, teachers need to be assisted in articulating the principles that guide their practice so that they can be shared. Because each teacher operates in a particular context, this practical knowledge needs to be shared, discussed and refined in a group in order to develop general standards that reflect the shared wisdom of expert teachers. While this kind of shared standard setting is beginning to occur in a few subject area domains (e.g. NCTM Standards, 1989), additional opportunities for teachers to share their collective wisdom need to be created in order to define appropriate standards for effective practice in different settings and different domains.

While some general principles for effective practice may be generated at the national or state level, these standards need to be adapted and refined to fit a variety of local contexts. National standards may set the direction for change but local "communities of practice" will need to be involved in the process of determining standards for effective practice and goals for change in their particular community as well. The opportunities for sharing described above need to occur at a variety of organizational levels, including groups of teachers with particular interests and specialties, schools, districts, and state and national levels.

Helping teachers articulate their craft knowledge needs to go beyond shared public discussions among practitioners about their practice. As discussed earlier, teachers need assistance in systematically describing classroom practice and accessing the underlying assumptions and theories that shape that practice. Valuable information on effective classroom practice can be gained from collaborative educational research projects in which teachers and researchers work together to carefully analyze both the context and content of teacher practice (Leinhardt, 1990). This research information needs to be shared with other teachers and used as part of the shared standard setting process.

Push beyond the present to the possible

While articulating the craft knowledge of expert teachers may help establish standards of current best practice and may provide excellent learning guides for teachers, these standards will not necessarily lead to the kind of transformed practice described earlier. Standards also need to be informed by research on individual and organizational learning and cutting edge theories on school restructuring and redesign in order to push teachers beyond the present to future possibilities. The whole process of standard setting can provide an excellent opportunity for looking beyond what is currently acceptable to what is ideal. Input from people outside of current "educational circles" needs to be included in the standard setting process to help support the kind of change in practice that will transform education.

Use collaborative reflection to support individual change

In addition to providing an opportunity for teachers and other concerned participants to share their collective wisdom and develop shared

beliefs about effective practice, the "collaborative reflection" process described above can be used to support individual change in practice. Once standards or beliefs are articulated, teachers can examine their practice in the light of these standards and set goals for change. Group interaction can be a powerful force for supporting this individual change process. The group can provide input that challenges individual perceptions, suggestions for more effective ways to practice and the support needed to overcome the discomforts and difficulties that always occur when people engage in change efforts. Organizational change and staff development literature suggest that coaching and other collaborative support greatly increase the likelihood that changes in practice will be sustained over time (Fullan & Steigelbauer, 1990; Joyce & Showers, 1988; Sparks & Loucks-Horsley, 1990). Thus, collaborative reflection groups can provide both the direction for individual change efforts and one of the mechanisms for supporting that change.

Create the conditions that support collaborative reflection

One unfortunate result of the isolated structure of teaching is that many teachers lack the skills needed to participate effectively in this collaborative reflection process. Collaboration has generally been limited to sharing stories and ideas and occasionally offering assistance when asked. Joint projects may center on curriculum design but careful examination of individual teaching practices and underlying beliefs and assumptions rarely occurs in current school settings (Little, 1990). The collaborative reflection process presents a strong challenge to the norms of autonomy and privacy present in the teaching profession and requires an openness to procedures that go far beyond accepted practice. Teachers are being asked to allow public

scrutiny of their practice and to go through the difficult process of hammering out shared beliefs and standards. This is a risky process for teachers and requires careful support.

There are a number of steps that can be taken to design a group environment that supports risktaking. Recognizing and discussing the current norms and inherent risks in the collaborative reflection process from the beginning will allow group members to articulate and deal with their fears openly. Teaching group members to use nonjudgmental language when commenting on their and others' practice is an important part of the group-building process. (Wildman & Niles, 1987). Structuring a time of affirmation and support into each session can also facilitate more open sharing. One of the most essential elements for promoting risktaking in a group is a shared belief in the competence of all the group members (Little, 1990). There may be disagreements about philosophy and practice but there must be an underlying respect for each person as a competent professional. A close scrutiny of practice can only be sustained when that respect is present.

Teachers have very little experience in getting below the surface and dealing with differences in beliefs about effective teaching practices. Conflict is viewed as something to be avoided and since these differences in beliefs and practice will inevitably lead to some conflict, the process of hammering out shared standards for effective practice may become very uncomfortable for many participants. It is important for the group to expect conflict and deal with it openly. Discussing the value of conflict as a catalyst for learning may help lessen the discomfort of group members. Helping group members become comfortable with conflict and develop the ability to use it

constructively will greatly enhance the collaborative power of the group (Idol, Paolucci-Whitcomb, and Nevin, 1987).

It is obvious from the discussion above that effective leadership is essential to support collaborative reflection. Training in group process skills such as conflict resolution, consensus building techniques, and active listening will help group facilitators be more effective in encouraging collaboration in the group. In addition, group facilitators must be well-versed in recent research and aware of a variety of information sources so that they can introduce alternative viewpoints and sources of information to stimulate changes in practice.

Keep the complex context in mind

The effects of the organizational context of schools on individual changes in practice are well established in teacher change literature. Because of the time-consuming and painful nature of changing fundamental beliefs and practices, organizational support for engaging in the collaborative reflection process is essential for its success. Providing time for collaboration with colleagues, training in group processes, support for risk-taking, and recognition for participation can help provide the incentives needed to engage in a long-term change effort. In turn, engaging groups of teachers, administrators, and other appropriate participants in the process of developing shared standards for effective practice, evaluating current practice in the light of those standards and setting goals for change can help create the kind of school culture that supports long-term changes in classroom practice.

Take the time needed for long-term change

An important lesson learned by those involved in organizational and individual change is that meaningful change takes a long time. Ongoing support and followup are needed over extensive periods of time to support significant changes in practice (Joyce & Showers, 1988; Sparks & Loucks-Horsley, 1990). The collaborative standard setting, reflection, and change cycle described above is really an ongoing process that needs to occur over long periods of time in order to support any major changes in practice. Building collaborative groups into the school structure instead of convening them for limited amounts of time seems to provide the most hope for supporting the ongoing change process needed to continually transform education to meet students needs in a rapidly changing society.

An example

One program that shows potential for supporting the principles for change described above is the video club component of the Video Portfolio Project, a collaborative project funded by the National Board of Professional Teacher Standards and involving researchers from Educational Testing Service, the Institute for Research on Learning, Bolt, Beranek, and Newman and classroom teachers from the San Francisco Bay area. The National Board for Professional Teaching Standards is developing a voluntary credential program for master teachers that is designed to improve teaching practice by providing recognition for outstanding teachers and involving teachers in self-evaluation and reflection (Eckert & Del Carlo, 1992; Frederiksen, Sipusic, Gamoran, & Wolfe, 1992). The Video Portfolio Project is one part of this credentialing program.

The major goal of the Video Portfolio Project is to develop ways of documenting and assessing effective teaching practice using video (Roschelle, 1992). The researchers, in collaboration with classroom teachers, have established criteria or standards for effective practice in secondary mathematics based on videos of exemplary classroom practice. These criteria are organized under four broad categories: pedagogy, climate, mathematical thinking, and management. They have also developed a procedure in which teachers who are seeking a Master Teacher credential can submit a portfolio containing videos of actual classroom situations, a description of the context, lesson plans, and materials for these particular learning sessions and a more detailed self-assessment to a national assessment center. Specially trained evaluators (including other teachers) assess these portfolios according to the criteria described above. This information could be used as part of a certification process that leads to a "Master Teacher" credential which would presumably lead to financial and leadership benefits for the teacher. (See Frederiksen et al, 1992, for a more detailed description of the process.) The designers of the project are attempting to combine performance assessment and reflective practice into a process and product that leads to improvement in classroom instruction (Roschelle, 1992).

Discouraged by the difficulty teachers were having in understanding and connecting these established criteria with their practice, the project designers decided to offer some specialized training in preparing a Video Portfolio. Recognizing the power of group interactions in supporting learning, they decided to form video clubs in which small groups of teachers would use videos of others' and their own practice to develop an

understanding of these established criteria for evaluating effective practice, evaluate their own practice in the light of the criteria, and prepare a portfolio for submission to the national center. Three clubs were formed in three different school districts in the San Francisco Bay Area during the 1991-92 school year. The clubs met 6 or 7 times throughout the year (approximately once a month) for 2 to 3 hours at a time. Club meetings were videotaped and interviews and participant observations in the schools were conducted with some of the club members (Eckert & Del Carlo, 1992). The results of these initial investigations suggest that while the current structure of these "video clubs" has some limitations, giving teachers the opportunity to engage in collaborative reflection using video has the potential to provide a powerful environment for supporting teacher change.

Video: A powerful tool for supporting collaborative reflection

The experience with the video clubs provides further evidence that video is a particularly effective tool to use when reflecting on practice. Video provides the kind of data needed to support the systematic reflection process described earlier. Rather than relying on self-reports which can be both inaccurate and incomplete, video captures and preserves the details of classroom practice. With video, the viewer can engage in multiple viewings of the same episode to allow more complete analysis of the situation. Video is especially helpful in supporting the collaborative reflection process. Teachers can engage in observations of others' practice without scheduling and location limitations. Since a group of people can view the same tape, it allows the social negotiation of standards based on evidence found in real

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practice. And unlike a "realtime" teaching situation, the tape can be stopped at any point to allow discussion and analysis.

There are limitations to the use of video tape for representing classroom practice, however. Unless multiple cameras and simultaneous viewing technologies are used, the viewer will only see part of the event at any one time. The need to see both the teacher and the students in order to get a complete picture of the teaching/learning process can make filming quite difficult. In addition, videotapes only focus on the immediate classroom setting at one point in time. Additional contextual details have to be provided in order to understand what is happening in a particular teaching episode. The written narrative and other documents that accompany the video portfolios allow a more complete understanding of classroom practice and thus are an essential part of the whole package.

Collaborative reflection does not come naturally

The need for special training and support in both reflection and collaboration skills was evident in the video club experience as well. It was obvious to the observers that reflecting on videos of their actual classroom performances was "a practice unfamiliar and threatening" to the participants (Eckert & Del Carlo, 1992). The teachers expressed a great deal of uncertainty about how to evaluate their own performance and how to give feedback to others as they participated in the collaborative reflection process. Teachers tended to be extremely critical of their own performance but were hesitant to make critical comments about others. It was obvious from the functioning of the various groups that additional training in observation, feedback, and

group processing skills was needed in order for the participants to engage in effective collaborative reflection on classroom practice.

The approaches used by the different group facilitators seemed to have a significant impact on the openness and depth of sharing that went on in each group. The amount of sharing and collaboration was most limited in the group in which the facilitator assumed a "two-tiered" leadership role, setting herself apart as an expert. This teacher also taught with some of the other participants and existing authority relations from the school seemed to transfer into the group, inhibiting more open interaction and inquiry. There was greater participation and livelier discussions in the group jointly led by one of the researchers and a teacher. These leaders seemed to be skilled in facilitating constructive group interactions while deferring to the teachers' teaching expertise. The experience with the video clubs provides additional support for the basic principle that qualified leadership and special training can greatly enhance the collaborative reflection experience.

Getting beneath the surface: Promoting meaningful change

One of the difficulties experienced in the video clubs was the tendency for participants to focus on exchanging strategies and ideas without dealing with fundamental issues underlying these strategies. As Eckert and Del Carlo observe, "Change is sometimes seen in terms of studying others' tapes for ideas that can be inserted into existing practice rather than basic changes in practice" p. 19. While some of this superficial sharing can be attributed to a lack of experience on the teachers' part in engaging in deeper analyses of practice, part of the problem lies in the structure of the Video Portfolio process as well. There is nothing built into the process that focuses on

making teachers aware of the need for fundamental change in beliefs and practice. In fact, the idea that teachers are qualified enough to be seeking Master Teacher status seems to imply that their practice is already highly effective and that they simply have to find evidence of that in their video segments.

In addition, the primary focus of the video clubs is on identifying practice, not examining beliefs and assumptions about teaching and learning and connecting them with practice. While the criteria for evaluating practice represent the designers' beliefs about what constitutes effective teaching, making those theories and beliefs explicit is not necessarily part of the process. It does not appear that the group participants receive any readings or engage in any discussion of the theoretical bases for these criteria. Since participants assess their practice in the light of established criteria, they are deprived of the essential experience of attempting to develop their own shared standards for effective practice. Allowing local communities of practice to establish their own standards within general guidelines would ensure that all participants struggled with the deeper issues underlying any definition of effective practice, not just the original group of criteria designers.

The broad heuristic guiding the standard setting process may be contributing to the difficulty in getting below the surface as well. Attempting to establish and understand all the significant aspects of something as complex as teaching in a limited amount of time is overwhelming at best. Attempting to evaluate and shape one's own practice in terms of all of these different criteria creates the kind of input overload that may lead participants to look for a few good ideas and forget the rest. The video clubs tended to

engage in this bounding process naturally i.e. they chose particular issues on which to focus at different points. A systematic breakdown of the system into more manageable parts (e.g. focusing on one criteria area for an extended amount of time) would remove this barrier to deeper analysis of practice.

An interesting assumption made by the project developers is that teachers can make meaningful changes in practice simply by observing someone else engage in effective practice and applying the techniques to their own practice. At this point, there is no systematic process for learning new instructional approaches built into the video club structure. The history of staff development has shown that the "observe and apply" format has very limited results in terms of supporting long-term change in practice. An inquiry reflection model in which teachers see examples of new practices, try them out, reflect with the group on what happened, refine their practice and try again has been shown to be much more effective in supporting long-term change (Joyce & Showers, 1988; Louden, 1991). More direct assistance in learning new techniques may help facilitate the fundamental change process that is the group's goal.

The short term nature of the clubs may have also contributed to the problem. As noted earlier, change is a long-term process. Six or seven sessions that occur monthly do not provide the time or frequency of interaction needed to support major changes in practice. The teachers were just beginning to understand the process and be comfortable interacting with each other by the time the groups were ending. Long-standing groups that meet frequently have more potential for supporting effective collaborative reflection and change in practice.

Combining performance assessment and reflective practice: Problems and possibilities

An additional barrier to making change in practice that became apparent in the video clubs centered on their basic purpose. Since the initial purpose of the clubs was to develop portfolios of exemplary practice, there was little incentive for teachers to try something new and unfamiliar. Because the teachers were interested in developing a polished product, they tended to focus on practices that had proved to be successful in the past. This deterrent to change is of particular interest to the project designers since one of their goals is to determine whether performance assessment and reflective practice can work together to support teacher change. It was obvious from these initial results that using performance assessment to drive reflection is not particularly effective.

This discovery comes as no surprise to those who have been struggling with issues surrounding authentic assessment and accountability. The difficulty in combining evaluation of competence for certification (summative assessment) with systematic reflection on current practice for the purpose of learning new approaches (formative assessment) has been well-documented in teacher assessment literature (Bird, 1990; Gitlin & Price, 1992). Because of the public nature of teaching and the need for accountability, some sort of measures of performance are warranted. However, the complex, contextualized nature of teaching makes it virtually impossible to design a systemically valid assessment device that provides a direct measure of the "whole" of teaching practice (Frederiksen & Collins, 1989). Thus, any

summative assessment device will have major limitations and will be viewed with skeptism by teachers.

In addition, as the observers discovered, the social processes involved in developing a shared understanding of effective practice and attempting to evaluate and change practice in the light of those standards are different than those required to prepare exemplary portfolios for review. The videos and written materials one would choose to examine and improve one's own performance are much different from those one would prepare to prove competence as well. As Roschelle (1992) suggests, "The best tape to discuss from a reflective practice point of view might be one in which lots of dilemmas arise; the best tape for assessment would have few dilemmas" p.9.

What has become obvious in the Video Portfolio Project is that putting the product before the process can severely limit the "change potential" of the video clubs. While preparing a portfolio displaying mastery of certain techniques may be an end product of the learning process, the primary focus of the clubs should be on engaging in systematic inquiry about effective practice. As Frederiksen et al (1992) observe:

> Video clubs arose as an ancillary attempt to solve a problem of assessment, where assessment was assumed to be the change-of-practice engine. In our own thinking we have come full circle on this relationship and now believe that assessment should be the occasion for Video Clubs, which are the change of practice engine that the National Board should invest in...For us, mastery assessment provides the occasion for a prolonged process of reflecting on one's teaching, which generates the change of practice that is desired by the National Board p.106-107

This perspective sets a new direction for the National Board in terms of supporting changes in teacher practice. As Eckert and Del Carlo suggest, "An important part of the National Board's work, then, should be to foster groups not FOR the purposes of portfolio preparation, but for the purposes of developing a strong discourse out of which portfolio preparation can arise" p. 27.

Maximizing the video club potential

Although video clubs as they are currently structured have a number of limitations, the concept of using video to support group standard setting and collaborative reflection on practice has great potential. By focusing on establishing video study groups (as I prefer to call them) at the local level, the National Board for Professional Teaching Standards has the opportunity to go a long way toward accomplishing their goal of supporting improvement in teaching practice. These groups will need to be carefully structured, however. To be most effective, the following design suggestions need to be kept in mind.

Embed the process in local school improvement and professional development efforts

If the video study groups become an established part of the organizational structure at the local level, they will have a much greater chance of obtaining the resources needed to ensure long-term teacher involvement. Assisting school districts in setting up collaborative study groups as part of their ongoing school improvement and professional development efforts will ensure at least a basic level of organizational support. Since the most powerful incentives for participation and change

exist at the local level, embedding the process in local teacher improvement efforts will maximize its effectiveness.

Involve all participants in the criteria development process

Determining what the criteria or standards are for effective practice is an essential part of the learning process that all participants should engage in. Rather than developing detailed lists of criteria and assisting teachers in understanding them, the National Board could provide a broad heuristic for examining teaching practice, information on current theories about effective practice and video exemplars of these practices, and training in using these materials to assist teachers in developing their own shared standards for effective practice at the local level. This standard setting process provides an excellent opportunity for making people aware of the need for change and training them in observation and reflection skills. The National Board could develop a library of resource materials that includes videos of exemplary teaching practice by current standards as well as alternative practices based on "cutting edge" views of educational possibilities. Having access to this rich source of information gathered from across the nation would greatly assist the change process at the local level.

Provide opportunites to learn and practice new approaches

Since observing and discussing alternative approaches to teaching does not ensure that a teacher will be able to put these approaches into practice, more systematic means for supporting teacher learning need to be built into the group structure. Building the reflective inquiry cycle into the group process would provide a more powerful source of support for participant learning. Combining direct training in particular instructional approaches

such as cooperative learning or reciprocal teaching with the reflective inquiry cycle would provide some particularly powerful learning opportunities for the participants. The National Board could provide training for group facilitators in supporting group interactions, teaching systematic inquiry techniques and gaining access to outside information and resources. Initially, it may work best to have specially trained outside facilitators who can help the groups get started in a constructive manner. (This also avoids some of the authority issues inherent in school structures.) The National Board could provide special facilitators to help establish video study groups at the local level with the goal of handing the leadership over to local teachers when the groups are well-established.

Create awards that support life long learning

Last but not least, the end goal of the process should not be some "final certification" but changes in classroom practice. Group members might engage in formal evalution in order to achieve special recognition or awards after they have been involved in a significant change effort, but these awards should be designed to represent milestones along a continuous learning path, not the end of the process. A global "Master Teacher" certificate seems to defeat this continuous improvement goal. The National Board needs to assist groups in designing alternative ways to recognize particular efforts and achievements at the local level and needs to grapple with alternative forms of recognition at the national level as well.

By establishing national guidelines, assisting teachers in engaging in criteria development at the local level, developing a resource library of

videos, and designing meaningful forms of recognition that reinforce continuous learning, the National Board for Professional Teaching Standards can play an integral role in supporting the teacher change process. It seems well worth their time to continue to refine and extend the work of the Video Portfolio Project with the goal of establishing the most effective system possible for supporting teacher change.

Conclusion

Change in teaching practice can be greatly enhanced by establishing groups of teachers at the local level who define standards for effective practice, reflect on their practice in the light of these standards, work together to set goals for change and support each other in reaching those goals. Special training and support is needed to engage in this collaborative reflection process, but the possibilities for transforming classroom practice make it well worth the investment of time and resources. Video can be a powerful resource for both providing vivid examples of what education can be and assisting teachers in examining current practices more completely. If structured carefully, video study groups appear to have great potential for helping teachers move from the present to the possible. Efforts need to be made at both the national and local levels to establish and support long-term teacher learning opportunities that allow collaborative standard setting and reflection to occur on a continuous basis. With this kind of support, teachers can work together to transform schools into effective learning environments for all students.

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